



**21st APEC TRANSPORTATION WORKING GROUP
MEETING**

Brisbane, Australia

23 – 27 September 2002

TPT-WG21/SC/SE/ITS/MINUTES

**STEERING COMMITTEE: SAFE AND ENVIRONMENT-
FRIENDLY TRANSPORTATION SYSTEMS (INCLUDING
NEW TECHNOLOGIES)**

INTELLIGENT TRANSPORT SYSTEMS (ITS)

EXPERTS GROUP

MINUTES

APEC Transportation Working Group 21st Meeting
ITS Experts Group Meeting
Brisbane, Australia, September 23 –24, 2002

Report of meeting – Prepared by USA

1. The APEC TPT WG – Intelligent Transport Systems (ITS) Experts Group meeting was held in Brisbane, Australia on Monday September 23rd from 1:30 PM to 5:00 PM and Tuesday September 24th from 10:30 AM to 4:00 PM. The meeting was chaired by USA (Mr. Walter Kulyk). Attendance at the meeting included representatives from 10 Economies including: Australia, Canada, People's Republic of China, Chinese Taipei, Japan, Republic of Korea, Singapore, Thailand and USA. Macao participated as a Guest Economy. The Agenda was reviewed and two additional reports from the US (1. STAR initiative, and 2. Standards Issues) were included as Other Business. The agenda was then approved.
2. As a starting point for the meeting and to give the new participants an insight into the Experts Group, the Chair provided a summary of major activities that were addressed by the ITS Experts Group over the last few meetings.
3. Follow up on actions from Manila meeting.
 - a. As a regular item on the agenda, a detailed discussion of the ITS Experts Group Action Plan was led by the Chair. It was confirmed that the overall goal and objectives for the Group remained the same. However, specific action areas were reviewed and updates to selected activities (with related schedule changes) were identified. The Chair took an action to reformulate the work activity identified as "Collaborate on ITS Implementations", distribute it intersessionally, and then hold a discussion on it at the next meeting. The Chair further agreed to update the plan in a more accessible format and to distribute it to all Economies prior to the next TPT meeting. Finally, it was recognized that the Plan is an evolving document that requires continuous update as plans change.
 - b. The Chair reviewed the activity of establishing common APEC needs for ITS standards development. The procedure is based upon the International Organization for Standardization (ISO) Transport Information and Control Systems (TICS) Fundamental Services (ISO TR 14813-1) and enables Economies to present their needs using uniform terminology. To address the Group's need to understand which standards may support which services, the Chair previously provided a nominal mapping of ISO Technical Committee (TC) 204 standards being developed against the 32 ITS/TICS Services in the Summary.

The ITS Experts Group conducted an exercise to list the TICS fundamental services in priority order. This would form the basis of input to ISO TC204 for their consideration for the development of ITS standards. The Economies that participated in the exercise with their listing of TICS priorities included: USA, Canada, Peoples Republic of China, Republic of Korea, Australia, Chinese Taipei, Japan, and Thailand. As a result of the exercise, the group agreed that the top 10 priority areas for development of further ITS standards were the following:

1. Traffic Control
2. On-trip Driver Information
3. Public Transport Management
4. Electronic Financial Transactions
5. Hazardous Materials & Incident Notification
6. Incident Management
7. Pre-trip Information
8. Route Guidance and Navigation
9. Emergency Vehicle Management
10. On-trip Public Transport Information

After reviewing the result of the priority exercise and based on comment from several Economies, it was agreed to add an additional priority in the top 10 to include Infrastructure Maintenance Management.

c. Mr. Gary Dolman of Australia gave a status report on an existing project currently underway on intermodal freight tracking. This project (Phase 1) involves an analysis and case studies of best practices including ITS technologies to track and trace sea and air containers from port of origin to its final destination. The Request for Proposal (RFP) was advertised in the Australian press and on the APEC website with a closing date of 12 September 2002. Eleven proposals were received and the consultant will be selected shortly. The project is expected to be completed and a final report submitted by June 2003.

It was agreed that the ITS Experts Group would participate in the evaluation process for the selection of a contractor for this project. It was also agreed that the ITS Experts Group would contribute to the oversight of this project as a member of an Oversight Committee. Canada was asked to represent the ITS Experts Group in the contractor selection process and project oversight.

Australia requested that Economies provide Points of Contact so that the contractor can properly conduct a survey required by the project. Australia also requested that Economies provide any case studies for consideration. Reply to Australia at Gary.Dolman@dotars.gov.au.

The Chair thanked Australia for doing a good job on preparing the tender and considering comments previously provided by members of the ITS Experts Group.

The group supported taking the lead in the development of a proposal to APEC for a follow-on demonstration project (Phase 2) on intermodal sea and air container tracking and tracing. Ministers at the Lima, Peru Ministerial meeting held in May, 2002 directed the establishment of this demonstration project. It was agreed that the development of this proposal would be accomplished intersessionally in time to be submitted to APEC TPT WG by the end of December 2002.

(The development of the Phase 2 project proposal and involvement in Phase 1 by the Group was coordinated with the Intermodal Task Force and eCommerce groups who supported the approach.)

5. The Group agreed to the final arrangements and agenda for the upcoming joint ISO TC204 and APEC TPT ITS Experts Group workshop that will be held on Oct 12, 2002 in Chicago in conjunction with the ITS World Congress. This workshop is aimed at better understanding the opportunities for APEC Member Economies to develop international ITS standards through ISO that benefit the APEC marketplace.

It was further agreed that the ITS Experts Group would propose to organize and conduct future workshops on a regular basis with ISO TC204 focusing on selected topics of concern.

4. Participating Economies presented status reports on their recent ITS developments.
5. The USA presented a status update of ISO TC204 activities occurring since the last TPT meeting. The focus of the presentation was on relevant information affecting the Group's involvement.
6. The US made a presentation on the proposed STAR initiative. In principal, Economies can support the concept of the STAR initiative because of the linkage between security, trade, and transportation. The ITS Experts Group also agreed to review the initiative on an intersessional basis and offer suggestions for possible ITS involvement.
7. The USA made a presentation on issues related to Intermodal Freight Standards, which should be considered during the definition stage of the Phase 2 demonstration project involving tracking and tracing of sea and air containers. This presentation emphasized the need for inter-committee coordination across diverse global organizations.
8. The Chair thanked all Economies for their active participation in the meeting.

Recommendations

The ITS Experts Group recommends that the Steering Committee:

- Endorse the ITS Experts Group report as an indication of the Group's activity.
- Endorse the APEC priorities for ITS standards development in the following areas:
 1. Traffic Control
 2. On-trip Driver Information
 3. Public Transport Management
 4. Electronic Financial Transactions
 5. Hazardous Materials & Incident Notification
 6. Incident Management
 7. Pre-trip Information
 8. Route Guidance and Navigation
 9. Emergency Vehicle Management
 10. On-trip Public Transport Information
 11. Infrastructure Maintenance Management
- Recognize the continual strengthening of relationships between APEC TPT WG ITS Experts Group and ISO TC204, especially through the conduct of joint workshops.
- Endorse the Group's upcoming joint workshop with ISO TC204 on 12 Oct 2002 in Chicago.
- Approve the further development of a demonstration project proposal on container tracking and tracing as led by the ITS Experts Group and in collaboration with the Intermodal Task Force and E-commerce Group. The APEC Ministers through their joint statement from the last Ministerial Meeting directed the development of this demonstration project.

Attendance List

Australia

Dr. Gary Dolman, Department of Transport and Regional Services
Tony Griffiths, Department of Transport and Regional Services
Prof Rod Troutbeck, Queensland University of Technology
Anthony Rowley, Australian Electronic Commerce Centre
Arnold Miranda, Tranztechnik
Bill Jordan, Queensland Transport
Dave Grosse, Queensland Transport
Anthony Stavrou, Queensland Transport
Bernadette McNevin, Queensland Transport

Canada

Colin Rayman, ITS Canada

People's Republic of China

Cai Hua, National Centre of ITS Engineering and Technology

Chinese Taipei

Pin-Chuan Chen, Ministry of Transportation and Communications

Japan

Akihiko Hoshi, Ministry of Land, Infrastructure and Transport

Republic of Korea

Dongsoo Ha, Ministry of Construction and Transportation

Macao, China (Guest Economy)

Chiang Nogu Vai, Lands, Public Works & Transport Bureau
Cheong Ion Man Goncaio, Lands, Public Works & Transport Bureau

Singapore

Chandrasekar, Land Transport Authority

Thailand

Ms Jiraporn Kaewkraisorn, Department of Land Transport

United States of America

Andrew Schoka, Mitretek Systems
Walter Kulyk, Department of Transportation

TICS Fundamental Services¹ Summary By Service Category

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
Traffic Management	Traffic Control (7) This service covers the management and control of traffic flows through the use of TICS technologies. It includes the following: a) adaptive traffic signal control, b) directional variable message signing, c) implementation of predefined traffic management strategies, d) integration of interurban and urban control, e) ramp metering, f) route guidance integrated with traffic control, g) speed control, h) tidal flow (e.g. directional lane control).	1	1	5	1	1	1	2	1	13 1
Traveller Information	On-trip Driver Information (2) On-trip driver (user) Information <i>includes</i> : incidents, park & ride options, parking, prevailing traffic conditions, public transport schedules (timetable and actual), regulations, roadworks, both planned and	1	4	7	1	1	1	3	5	23 2

¹ ISO/TR 14813-1:1999(E), Transport information and control systems - Reference model architecture(s) for the TICS sector - Part 1: TICS fundamental services

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	emergency, tolls, weather, roadside phones (roadside services, including callboxes).									
Public Transport	Public Transport Management (23) This service covers the application of TICS technologies to the operation, planning and management of public transport operations. It includes the provision of real time information on vehicle location and status, enabling the identification of departures from schedules and dynamic rescheduling.	1	13	3	1	5	1	1	8	33 3
Electronic Payment	Electronic Financial Transactions (29) This service includes the use of electronic, or 'cashless' payment systems for transportation.	1	23	7	1	1	1	8	3	45 4
Traffic Management	Incident Management (8) This service provides the capability for detecting and responding to various incidents on the transport network.	13	2	2	1	19	7	4	4	52 5
Emergency	Hazardous Materials & Incident Notification (28) This service covers the use of TICS technologies to provide authorities with data on the nature, location and condition of hazardous goods cargoes.	1	8	1	1	1	17	9	14	52 6

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
Traveller Information	Pre-trip Information (1) This service provides single mode, multi-modal and inter-modal transportation information at home, work, hotels, major public locations, such as shopping centres, and on portable terminals. Pre-trip information includes current information on network status, traffic conditions, road and weather information, prevailing traffic regulations and tolls.	13	3	14	1	5	7	9	11	637
Traveller Information	Route Guidance & Navigation (5) This service provides information on community and/or individual user optimum route options for specified destinations. Best route options may be calculated taking account of network and public transport information and may incorporate multi-modal options such as Park and Ride.	13	12	7	1	19	1	12	13	788
Emergency	Emergency Vehicle Management (27) Emergency vehicle management includes the application of fleet management, route guidance and traffic signal priority techniques to the management of emergency vehicles such as	13	6	3	1	5	27	5	21	819

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	fire, police and ambulance.									
Traveller Information	On-trip Public Transport Information (3) On-trip Public Transport Information is provided to the traveller once the trip has started. The type of information provided may <i>include</i> : a. boarding point information, b. fare information, c. interchange possibilities, d. route choice, e. time of next service, f. where to get off.	1	18	5	16	5	7	19	12	83 10
Commercial Vehicle	Commercial Vehicle Pre-clearance (18) Commercial vehicle pre-clearance allows commercial vehicles, including trucks and buses to have credentials and other documents, safety status and weights checked automatically at normal road speeds. A principal objective being to effect preclearances with minimal disruption to the vehicle journey and the traffic flow.	1	5	12	16	5	22	30	7	98 11
Emergency	Emergency Notification and Personal Security (26) This service applies TICS technologies to provide both driver/personal security services and automatic incident notification for	13	16	25	1	5	12	7	22	101 12

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	private car drivers and goods vehicle drivers.									
Commercial Vehicle	Commercial Vehicle Administrative Processes (19) This is complementary to service 18 (Commercial Vehicle Pre-clearance). It enables hauliers and shippers to purchase annual and ad-hoc credentials, using communications and computer technologies.	1	17	12	16	5	1	24	28	104 13
Traffic Management	Infrastructure Maintenance Management (11) This service covers the application of TICS technologies to the management of road, communication and computer infrastructure.	1	7	17	1	19	22	32	10	109 14
Commercial Vehicle	Commercial Vehicle Fleet Management (22) At a multi-modal level commercial fleet management includes logistics and freight management systems. It also covers the use of Automatic Vehicle Location (AVL) and vehicle-to-control centre communications to provide vehicle location and other status information to the fleet operators dispatched.	1	21	10	16	5	27	23	6	109 15

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
Traffic Management	Transportation Planning Support (6) This service covers the use of TICS systems to provide data regarding traffic flows and travel demand for transportation planning purposes.	1	10	14	25	5	12	29	15	111 16
Traffic Management	Policing/Enforcing Traffic Regulations (10) This service covers the application of TICS technologies to the enforcement of traffic laws and regulations.	13	15	25	1	26	7	20	9	116 17
Commercial Vehicle	Commercial Vehicle On-board Safety Monitoring (21) This service covers the use of on board monitoring systems to oversee the safety status of commercial vehicles, commercial vehicle drivers and cargo during the entire course of the trip.	13	14	17	1	19	12	25	16	117 18
Traffic Management	Demand Management (9) This service is the development and implementation of management and control strategies designed to influence the demand for travel. These strategies influence the overall level of demand for travel at different times of the day and relative demand for different	13	11	25	25	5	17	26	2	124 19

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	modes of transport, through the management of pricing structures, area access control or zone entry regulations.									
Commercial Vehicle	Automated Roadside Safety Inspection (20) Automated roadside safety inspection is the use of TICS systems to enable roadside access to safety performance records of hauliers, vehicles and drivers..	1	8	17	25	5	27	18	29	130 20
Traveller Information	Personal Information Services (4) This service provides information either in a pre-trip, or on-trip context. This information is complementary to service 1 (Pre-trip Information) and service 2 (On-trip Driver Information), providing a 'yellow pages' type function.	13	19	25	16	5	20	9	27	134 21
Safety	Public Travel Security (30) Public travel security includes the surveillance and monitoring systems for public transport facilities, car parks and on-board public transport vehicles.	13	22	10	1	19	30	21	24	140 22
Vehicle	Longitudinal Collision Avoidance (14) Longitudinal collision avoidance includes the use of sensors and control systems to detect potential for collisions	13	30	17	25	5	17	17	17	141 23

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	either prompting the driver to take action or automatically initiate avoiding action. This includes the application of obstacle detection systems.									
Vehicle	Lateral Collision Avoidance (15) Lateral collision avoidance is the use of systems (such as sensors and control systems) to monitor the potential hazards involved in lane keeping, lane changing, entering and leaving high speed roads and overtaking.	13	29	17	25	19	20	6	18	147 24
Safety	Safety Enhancement for Vulnerable Road Users (31) This service covers the application of TICS technologies to the enhancement of safety levels for vulnerable road user groups (particularly elderly or disabled and road maintenance workers).	13	25	17	16	5	22	28	25	151 25
Vehicle	Safety Readiness (16) Safety readiness is the use of monitoring and warning systems for both private car driver and vehicle.	13	27	25	16	26	12	14	20	153 26
Vehicle	Vision Enhancement (12) The service is the application of TICS technologies to the enhancement of driver perception through the use of	13	26	25	16	26	12	16	23	157 27

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	in-vehicle equipment.									
Safety	Intelligent Junctions and Links (32) This service covers the application of TICS technologies to the provision of monitoring and warning systems at junctions (including modal, multi-modal or inter-modal), both signal controlled and priority.	13	20	14	1	26	30	31	26	161 28
Public Transport	Demand Responsive Public Transport (24) This service covers the provision of on-demand transport services to individual travellers. This will provide demand responsive transport services to the user, while enabling transport operators to dispatch and schedule vehicles.	13	24	17	25	19	7	27	31	163 29
Vehicle	Pre-crash Restraint Deployment (17) This service uses TICS technologies to determine the velocity, mass and direction of vehicle and objects involved in a potential collision and the number, location and major physical characteristics of occupants.	13	31	25	16	26	22	13	19	165 30
Public Transport	Shared Transport Management (25) Shared transport management	13	28	17	25	26	30	15	30	184 31

Service Category	Service Name	Japan	Canada	USA	China	Thailand	Korea	Chinese Taipei	Australia	Joint Rank
	provides real-time ride matching services to users at home, office, or other locations.									
Vehicle	Automated Vehicle Operation (13) This service is the application of TICS technologies to completely automate the driving process, creating a 'hands off' driving environment.	13	32	25	25	26	22	21	32	196 32